Memorandum

DATE: SEPTEMBER 19, 1996

TO: ALL INTERESTED PARTIES

FROM: Lamar Bradley, DIVISION OF UNDERGROUND STORAGE TANKS

RE: CHANGE FOR UST UPGRADING USING CATHODIC PROTECTION FOR TANKS OVER 10 YEARS OLD

If you saw a memo from me addressed to Alternate Procedures Vendors dated August 29, 1996, you are aware that the Tennessee Division of Underground Storage Tanks was proposing a change regarding Cathodic Protection upgrading for tanks over 10 years old at the September 18th UST Board Meeting.

I am pleased to announce that the Division has discussed this with the Tennessee Petroleum UST Board and will implement this change. **As of September 18, 1996, the Tennessee Division of Underground Storage Tanks will no longer require that an alternative assessment procedure or an internal inspection be done as a part of the tank assessment procedure for cathodic protection upgrades.** Instead, the Division will consider the addition of cathodic protection upgrades to meet the requirements of 1200-1-15-.02(2)(b)2.(iv) once the following conditions are met:

1. Tanks considered for upgrading must pass a precision tank tightness test which tests the entire tank.[1] Lines must also pass a line tightness test if they are upgraded, otherwise they must be replaced at the same time the tanks are upgraded. Tanks failing a tank tightness test for any reason may not be upgraded by this method unless they are subsequently repaired and successfully pass a precision tightness test. These tests must have been conducted within 120 days prior to the completion of the cathodic protection upgrade. Monthly monitoring results or monthly SIR results may not be substituted for a precision tightness test for tanks over 10 years old.

2. Field-installed cathodic protection system upgrades (both impressed current and galvanic) must be designed by a corrosion expert[2] and designed so that releases due to corrosion are prevented for as long as the UST system is used to store petroleum. (This is not a change from the previous Division position).

3. Following the addition of the cathodic protection upgrade, the tank owner or operator must implement a form of monthly monitoring release detection within 30 days for the upgraded system. Monthly monitoring includes automatic tank gauging, vapor monitoring , groundwater monitoring (where applicable), monthly SIR (statistical inventory reconciliation), interstitial monitoring, or manual tank gauging (only if tanks are 1,000 gallons or less). The combination of inventory control and tank tightness testing will no longer be allowed for release detection on systems upgraded using this option. Continuous monitoring, such as continuous interstitial monitoring devices and electronic line leak detection, is also acceptable for UST systems and components. (This is currently a regulatory option)

4. Between three (3) and six (6) months following the addition of cathodic protection, upgraded tanks must be precision tank tightness tested again. See footnote for condition 1. (This is currently a regulatory option)

5. Following CP upgrades, tank owners and/ or operators are required to follow all general operating requirements pertaining to operation and maintenance of cathodic protection systems described in 1200-1-15-.03. (This is currently a regulatory requirement)

In announcing this alternative to internal inspections through the combination of tank tightness testing and monthly monitoring, the Division is not precluding the use of internal inspections or alternative assessment procedures as described in ASTM ES 40-94. Tank owners may still opt to use internal inspections or alternative procedure assessments as a means of assessing their tanks prior to upgrading with cathodic protection if they so desire.

If you have questions about this change, please call me at 615 532-0952.

Footnotes:

1. "Tank tightness testing" for the purpose of meeting this requirement must test the entire UST system, and the method or device must be listed in the List of Leak Detection Evaluations for Underground Storage Tank (UST) Systems by the National Work Group on Leak Detection Evaluations. If an underfill precision test is used, the ullage space must also be tested at the same time, and the entire tank found to be leak-free. If an automatic tank gauge is used to meet this requirement, then the following conditions must be met:

a. The device must be permanently installed and third party certified as capable of performing a 0.10 gph leak test with a probability of detection of at least 95% and a probability of false alarm of 5% or less, and,

b. The ATG must test the tank at the maximum product level capacity allowed by the overfill device; or

c. Conduct an underfill tank tightness test with the ATG in conjunction with an ullage test on the unfilled portion of the tank.

These tests must be conducted with no change in product level. The tank must be idle during the test.

2. The Division considers a "corrosion expert" to be an individual who is certified by the National Association of Corrosion Engineers as a *Corrosion Specialist* or a *Cathodic Protection Specialist*.